

MCHB/DRTE Webcast

Autism Research at NICHD

February 25, 2010

MADHAVI REDDY: Thank you for joining us today for this webinar on U.S. Research and Resource at the National Institute of Child Health and Human Development. I'm a public health analyst in the training program and I'll be your moderator today. I'm joined by our presenter, Alice Kau. Alice Kau is responsible for the intellectual and development programs with an emphasis on autism research. She serves as a key member of the behavioral science research and assists in the formulating and planning of the program. She will provide an overview of the Autism Centers Program, including the research sites and projects. Research and resources funded by the intellectual and developmental disability branch and a discussion about integrating aspects of the combating autism acts initiative mission and the NICHD Autism Spectrum Disorder into a common effort for collaboration.

After her presentation, we will have approximately 15 to 20 minutes for a question and answers so please feel free to submit your questions during the presentation. We encourage you to submit questions at any time during the broadcast. Dr. Kau will take questions after her section on the autism centers of excellence program so please feel free to submit your questions at any time so I can ask her questions throughout the webinar. Please type your question in the white message window on the right side of your web interface. Select question for speaker from the drop down menu and hit

send. Please include the name of your state or organization in your message so that we know from where you're participating.

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Finally, at the end of the broadcast, the interface will close automatically and you will have an opportunity to fill out an online evaluation form. Please take a couple of minutes to do so. Your response will help us to plan future web casts and improve our technical support. Now I am very excited to introduce Dr. Alice Kau to the combating autism act initiative community. I'm going to turn it over to you now.

ALICE KAU: Thank you. Such a pleasure to be here today to talk to you about autism research and primarily autism research funding at NICHD. I will go over five areas of funding that are relevant to autism. We will spend the majority of time on ACE's program and I'm hoping that we could have a break at the end of that presentation to take some questions. You know, to break up this long, you know, one-way conversation which might be boring.

OK. Next slide. The Autism Centers of Excellence or ACE program, it will be the first focus of my presentation today. This program is ongoing. Trans-N.I.H. collaboration involving five institutes. NICHD was of the initial institute for this initiative. That's the first institute. And then it's the national institute on deafness and other communication disorders, NIDCD and the national institute of environmental health sciences, that's NIEHS, and national institute of mental health, NIMH and National Institute of Neurological Disorders and Stroke. These five institutes compromise the committee. The ACE program represents programs for the major funding programming. The collaborative programs of excellence and autism, the CPEA, and the studies to advance autism research and treatment program or the STAART program. The CPEA program was funded by NICHD and lasted for 10 years. When I came to N.I.H. we were into the second face of the CPEA funding so that's -- so I was a witness of that second phase.

The STAART program was funded by all five institutes of the N.I.H. Autism Coordinating Committee so the five institutes that funded ACE's also funded the STAART program. STAART was only funded for five years and it was a result of the mandate by the child health -- the children's health act of 2000. When we designed the ACE program, we had centers and networks. The centers are the multidisciplinary research programs usually located at one institution but that's not a requirement. Usually, for example, like one big institution such as UCLA, and the goal is to involve multidiscipline research and usually focus on one area. For example, the UCLA ACE

center focuses on social communications and they involve genetic studies, imaging study and intervention. So -- but they all focus on social communication deficits. The ACE networks utilize the expanded ro1 funding mechanisms. Networks involve multiple sites focusing on a specific topic of research and typically, a network, all sites use the same protocol. A typical example of a good network, an example would be a drug trial. For example, say you were doing a drug trial for children between three and five-year-olds and you need 200 participants. It would save time if you only had one site of recruitment. But you do have five sites and you cut down the recruitment time. You know, that's usually an example of using a network mechanism for ACE's. All ACE's centers and networks are required to submit data to the national data base for autism research. NDAR, I'm not going to go into details about it but it is a trans-N.I.T. initiative. That's the lead on this project. All of the data out there are sent to NDAR and will be shared through NDAR. One unique feature of NDAR that I talk about a lot is Global Unique Identification. GUID. That links all the participants by their unique I.D.s. If you have one child in an enter intervention study in California and then a child moves to Pittsburgh and involved in the neuro imaging project and then the child may also contribute data, sometimes without a system way of tracking, we can link all of the data together. But having a GUID, we can link all the data together. And also to avoid duplications of the data. So if a child moves around or they, you know, a lot of times parents want, you know, to sign off on more than one project, they might have multiple assessments, multiple sites, and in terms of research, you don't want to count them more than once. All ACE centers and networks involve common measures that we have designed. They are also required to attend annual meetings in the Washington

area. Actually, the first ACE meeting is coming up in June in Bethesda. Common measures, these are all of the participants need to be assessed. I'll give you some examples. Medical/family history, physical/naour local exams, karyotyping. These are the medical aspects of the assessments that were not commonly done on all of the participants of research in CPEA and STAART. When we designed ACE's, it was agreed that we need to expand beyond the behavioral common measures. A.D.I., it's required for all participants. Diagnostic options are required for all participants. These two measures sometimes are not applicable to some participants. For example, we had studies involving six months to infants. You can't really do a full assessment on them. But whenever it's applicable, we ask all of the children and all of the participants to be assessed to all of the common measures. And finally we require all participants be given an I.Q. or developmental assessment and we don't require a specific I.Q. measure but we ask that there will be a nonverbal and verbal component of the measures they choose to use. This is the summary of the ACE program that I have talked about so far. The funding started in two years. It could be in fiscal year 2007 or fiscal year 2008. It's for five years so it would end in 2012 or 2013. I was talking earlier that the ACE took two years of planning. I remember that very well. And it never stops. It's one obstacle after another. The reason I mention that, I know time flies. It goes very quickly. So this is where the ACE centers and networks are located. The squares are the network sites and the circles are the center sites. I can't see them clearly but I hope you can on your computer. There are a total of six centers and five networks with the exception of UCLA, each site only has either center or network. UCLA has one ACE center and one ACE network.

The Centers , the center programs, there are six of them. I'm going to pull my notes here. They all focus on different type of studies and I'll go over them briefly and make mention of some of them. Nancy Minshew center is located at the University of Pittsburgh. It focuses on the neuro imaging studies of higher functioning of people with autism. Focused on information and learning and a lot of important findings on connectivity related to the issues. The next center is UCLA. Susan Bookheimer. Know that the original person is Mary Ann Stickman. She was awarded to the center grant but unfortunately, she has had to retire so we passed on to Dr. Susan Bookheimer. Dr. Susan Bookheimer is a long time investigator so she's not new to the field and she's just ready to pick up and get the ball rolling and is doing very well. UCLA center I mentioned earlier focuses on the causes and treatments for social communications deficits in autism. The next center is Ami Klin. This focuses on early developments, early causes, early interaction and disruptions and the consequence of disruptions of those interactions. Dr. Ami Klin is also at Yale University which is one of the sites of the CPEA program. So it's a long-term progress and a lot of it senior and junior investigator all established and connected at Yale University. The next center is Dr. Edwin Cook. He's relatively new to the ACE program. He's not a new investigator but he was not involved in the CPEA or the STAART programs. The University of Illinois at Chicago focuses on genetic influences, brain chemists and brain functions that may be related to the repetitive behavior. He called it the insistence of sameness. Another interesting project that Dr. Cook is testing is to focus on whether genetic influences -- well, what genetic factors influence people's reactions to the medications that are

supposed to alter the behavior and the insistence of sameness domain. It's a very exciting area of study. I can't wait to see the results of the study from this center.

The next ACE center is Bryan King at university of Washington. You probably all know that Dr. Dawson was the original person there. She left after the grant was funded and awarded. Dr. King is now the current P.I. for the university of Washington center. The university of Washington ACE center is a model of risk and protective factors in the study of autism. So they look at genetic roots and other factors that may predispose people to develop autism but also look at a protective factor and here might be -- there might be -- it might explain why people share the genetic vulnerability but not always develop autism.

The last center, ACE center, is located at UCSD, University of California, San Diego. The P.I. is Eric Courchesne. He used the participants referred by the general physicians other than from what some most commonly, the siblings, older children who have already been diagnosed of autism. So he studies as to all of the high risk findings to see if there are differences. ACE networks, we have five of them and they all engage in different types of study and very exciting projects. Dr. Joe Piven's network focuses on the early brain development study. The first of this study is six months or infants. So repeated brain imaging will be done at six months, 12 months and 18 months to hopefully catch the time when there's a brain enlargement occurred. It's a very challenging project because the goal is not -- you know, trying to bring the babies in to the lab at the right timing. We are also very excited to be the primary funders for

this project. Next center is Daniel Geschwind ACE network from UCLA. Dr. Daniel Geschwind will have 400 participants to the two or three collections and the goal is to have 200 of the 400 from African-American communities so that we would be able to see if there's ethnic or, you know, discrepancies in the genetics of of risk of autism. The next is Diane Chugani. Dr. Diane Chugani will attest at potential treatments from the drugs and hopefully that will add to our, you know, understanding of potential treatment for autism. The next study, next network is located at Drexel University with P.I. Dr. Craig Newschaffer. This is a famous study. I don't know if you have heard -- they're all famous but this is early study. Early autism risk longitudinal investigation. The goal of the network is to recruit 1200 pregnant women who already have a child with autism. The goal is to, you know, follow the -- well, to commence the study at a point of pregnancy and then follow up until the baby turns three years old and they will collect genetic and environmental exposure and all sorts of information and hopefully, you know, find whether it's genetic, environmental, interactions.

The last but not least network is located at UC, Davis. Sally Rogers. Dr. Rogers will conduct a randomized control trial comparing early intensive behavioral intervention with standard community based treatment for 18 to 24 month old toddlers. So these are all, you know, the centers and networks and while it's a wide range of topics covered, behavioral, drug trials, genetics, imaging, environmental, all sorts of assessment, it's pretty comprehensive. These are my peers that I work with very closely and we are the program officers running the autism coordinating committee. So this is the end of the ACE presentation and so I thought this would be a good time to

pause and see if we have questions and if not, we can take a -- pause for a minute or two.

>> we don't have any questions currently but we are joined by guests in the room today. If anybody participating in the room has any questions, we can take a minute or two.

>> Or clarifications. There's so much information. And I have to say, I have never done a webinar. It's very interesting to talk to a screen.

LAURA KAVANAGH: This is Laura Kavanagh. You have a history in supporting autism research and shorter experience along with the -- [Inaudible] how would you recommend that we centers collaborate between the centers and networks and our existing research networks that we have here?

>> That is very exciting to know. I actually read that on your website. I was trying to understand our common missions and maybe overlap or maybe there's a gap between doing what we're doing and doing what you're doing. I wonder if -- I did not read the details. I know Dr. Diane Chugani is the intervention P.I. and the other physical health intervention -- actually, I know both of them. I just don't know if there's -- if the same studies or different. Networking, Dr. Diane Chugani is at ucla and we know they have a center and an ACE network. She's not going to be a stranger to the ACE -- you know, the community. I don't know how -- do you have an annual meeting?

>> We do, actually. In December.

>> Right. Right.

>> I want to make sure we make connections.

>> I would like that very much. Dr. Diane Chugani has done very many projects and has very important publications. My question now is are we funding this similar network? Are you doing similar work or different in some nature because one is from N.I.H. and one is from HRSA? [Inaudible]

>> Could you come up to the microphone, please? We're having a hard time hearing.

>> The UCLA project, the P.I. is Dr. Cassani.

>> Dr. Susan Bookheimer. Susan Bookheimer. They know each other.

>> Then we actually -- I see a lot of overlap. For each of our networks, there are multiple sites and then many of the people that are outside investigators are overlapping with many people that you mentioned. I'm sure there are many exciting things that --

>> That we don't know about. We're already interacting. We just don't know about it. That's great. So we like to know that. Networking is such a powerful thing. They know their own collaboration and they become collaborative rather than competitive. That's really good.

>> I would like to explore that further with you.

>> OK. Great.

>> Could I ask you to take the pages away from the micro phone? We're having a little bit of disturbance hearing.

>> All right.

>> That's fine. Thank you. I have one question and I'll ask you right now. The question is, you mentioned funding for recruitment of minority participants. Will you discuss funding to support such efforts if such mechanisms are already in place?

>> Diversity and health disparity are important areas that N.I.H. focuses on. N.I.H. has an office that houses disparity and that implies the adequate recruitment of people into research of all backgrounds. Actually, there's no current -- currently there's no R.A. or P.A. specifically tied to disparity or diversity research in autism. But that doesn't prevent you from applying. If you have a group project and can contact me, you can do it any time. N.I.H. is unique in that we have three rounds of year of opportunities for

investigators initiated projects. There are standard dates, it goes through peer review. You have my contact information so they can contact me. I'll be happy to help you formulate your hypothesis and go through the N.I.H. funding process. We are planning in the process a seminar to address the health disparities focusing on the diagnosis issues. For example, a lot of information from publications, for example, the paper in pediatrics that published last year mentioned that children of -- caucasian children are more likely to have a higher prevalence than children of other backgrounds but we don't know if it's because -- why is that about? One issue is to really look into it to see if the issues were totally addressed. The prevalence data reflects beats going on in the communities. We are planning a meeting, a seminar, and I will let Laura know. It's going to be at N.I.H. main campus.

>> We would be interested in that. We do that in collaboration -- [Inaudible]

>> You know the final result that I mentioned.

>> We're certainly interested.

>> Dr. James is the director of the health and disparity division and she is planning the workshop. A seminar to begin with and then maybe we'll have a bigger workshop. I will keep Laura advised of that.

>> Thank you. Are there any further questions in the room? OK. We don't have any further questions currently. So do you want to continue with your presentation?

>> Sure. This is very interesting. Usually at which, you know, I can now say next slide.

The funders that we have at N.I.H. as a whole and specifically it was due to the research act funding. You probably all know that on February 17, 2009, president Obama signed an American Recovery and Investment Act legislation. It's also called the Recovery Package. N.I.H. received \$10.4 billion from this act. So because of this influx of money, we had accomplished and obviously competed and funded several autism specific projects. The Recovery Act is obviously not just, you know, for autism but there are autism specific that the N.I.H. published. NIMH leads them and contributes to the whole initiative. It was listed that there are \$57 million of commitment for this funding initiative but actually, in the November 2009 press release, it was indicated that actually, we fund -- N.I.H. collected \$67 million in projects. It was a huge opportunity that would not have been possible without a stimulus package available. And we -- you know, NICHD contributed \$20 million to this initiative. We are very, very excited. The topic areas addressed are listed on the slide. Most of them are addressing the short-term objectives of the IACC strategic plan. Most of you probably know or may not know the inter agency coordinating committee had just revised its research strategic plan. Hopefully we can make a lot of progress after results of this stimulus funding on the strategic plan. Here are some examples of the ARRA projects that NICHD funds and they are all important projects that IACC committees discuss

over and over. We would not have been able to fund without the stimulus funds. So it's great. For example, the first project that I cited is to conduct early intervention in high risk infants to prevent A.S.D. This is Dr. Sally Rogers and involves intervention in infants as young as six to 11 months old. So the goal is to either alleviate or minimize the autism symptoms by early intervention. The second that I mentioned or I indicated is improving and streamlining screening and diagnosis of A.S.D. at 18 and 24 months of age. As you probably all know or may not know, the American academy of pediatrics recommends 18 months of screening for autism and another repeated screening at 24 months. So this project will help to come up with a good streamlined and improved measure for diagnosing autism at this age range.

The next project focusing on a school based, peer led social skills intervention for adolescents with high functioning autism. And a lot of effort in autism funding has focused on the younger ones. Because the early intervention, as a result of early diagnosis can improve the outcome. However, we have a generation of, you know, people who are developing and growing into adolescents and young adults and they need help. They need intervention. This is one example of addressing the needs of older people, older adolescents, older children. Older people, we're thinking older people like me. Finally, it's creating a screening interview for research studies of A.S.D. and you know, the centers of autism diagnosis is very time consuming. All of the people in the room would appreciate. To qualify to give this measures, you know, requires training. But sometimes the genetic study, you know, calls for several hundred participants and, you know, it will be nice to have a accurate interview for research

purposes. This project involves a A.D.R. to we use phone interviews for research purpose. Hopeful until two years we could have some results in this area. So another I'm going to shift gear a little bit to talk about the branch that I reside in. It's the NICHD, intellectual and developmental disabilities branch. This branch was called MMRD. Mental Retardation and Disabilities Branch. It was just changed and, you know, it's not easy to change names in government so -- but MRDD just out of date. So I'm so pleased now. I don't have to say my branch is MMRD. Very embarrassing. Now just IDD branch. Here is my branch members. You see Melissa Parisi joined us about a year ago to be the chief of the branch and I'm up there in charge of autism programs and Dr. Mary Lou Oster-Granite right next to me is in charge of the research program. She's also the scientific officer for the cooperative agreement. And right below Dr. Mary Lou Oster-Granite is Dr. Ljubisa Vitkovic and Dr. Ljubisa Vitkovic is a scientist and he's going to be assisting me in managing the basic science, the portfolio within autism. And Dr. Urv is in charge of the graduate research centers and the newborn screening project. It's a small branch but we are very, very busy. These are all very highly visible programs and keeps us very, very busy.

Next two slides are examples of the type of project that the I.D.D. branch is in charge of. We have autism programs, the I.D.D. program that I will get into a little bit later. It overlaps with some of the HRSA funding so I thought I could mention it. Rare disease cooperative research Consortia that Mary Lou and Melissa are involved in. Senator Paul Wellstone muscular dystrophy cooperative research centers. Dr. Ljubisa Vitkovic is in charge of that. And we also have newborn screening the long standing priority that

NICHHD which is also under the I.D.D. branch. We have research resources and we have been that is becoming more involved in autism.

That's the next slide. I forgot to say that. And I'll go over that later. And the branch supported training. Training is a very important mission in our branch. And we try to advertise that whenever we have an opportunity. In 2008 when an act of Congress changed the name of the NICHHD, and some of you may know, it used to be the national institute of child health and development. In 2008 Congress changed the name to add Eunice Kennedy Shriver to NICHHD. Now the full name is the Eunice Kennedy Shriver national institute of child health and human development. When the name of the institute was changed, the NICHHD leadership also changed to I.D.D. Adding unit Kennedy Shriver to all of the IDD. So we now have 15 unit Kennedy Shriver IDDRCs across the country. The IDDRCs highlight. There are 15 of them across the country and I have a map after this to show you but the site of IDDRCs overlaps with the university centers for excellence. It also overlaps with the leadership education neuro developmental and related disabilities. So these three programs are really overlapping primary activities of research in developmental disabilities across the country. And that's what I highlighted in the IDDRCs and the other reason is that all 15 of them support autism research. They also tie into NICHHD autism researching. They now fund research. They are core support so they have imaging core, genetic core, depending on the site of expertise. They support projects that are funded by other agencies. All funded by NICHHD if possible. This is the locations of the 15idddrc. I know you can't read them and it's not important that we go over them but many of them

overlap with the ACE centers, too. The university of Washington, UCLA, University of North Carolina, Yale University so a lot of overlaps.

Next slide, please. And within the -- we also fund fragile x research centers. Fragile x research centers are centers within centers. We have IDDRC centers and within them we have three fragile x research centers and networks and I'll tell you why. It's a very busy slide. It's hard to read. There are only really three sites but this network, they have many collaborating sites. It's a very successful program monitored and, you know, my colleague in my branch, you all know one in 2,500 births involve, you know, on average involve a fragile x diagnosis. Fragile x is the most commonly diagnosed inherent form of I.D.D. The three fragile x research centers are the Baylor college of medicine in Texas, university of North Carolina in Chapel Hill and university of Washington. Again, there are overlaps with autism and we all know there's a huge overlap in fragile x and autism. Not 100% but I think the estimate is about 30% of fragile x people will also meet criteria. The research resources. We have several research resources supported by my branch, NICHD, but one is getting more attention. The NICHD brain and tissue bank is gaining a lot of attention recently because a few -- actually, a couple of the objectives in the strategic plan addresses the need for an international network. This is the one bank that NICHD funded and began to support in 1991. This is not an autism brain and tissue bank but they also collect brain tissues, fragile x, down syndrome. It's a great resource for research. We reawarded in August of 2009 to the University of Maryland. The goal is to expand the collection of A.S.D. tissues. And hopefully if we can do a good job in this bank, we will lay the foundation

for establishing the international network of biobanks funded by the IACC strategic plan. Brain and tissue banking is really not my area of expertise. I'm a psychologist by training. But I have helped in competition and realized it's such an important part of resources that we need to pay attention to allow research to progress. That may not be able to without the availability of the tissues. The last topic of NICHD's autism funding that I want to touch upon is the training component. Training the next generation of investigators is the one important objective of the I.D.D. branch. NICHD and I.D.D. branch in particular supports individual training grants and institutional training grants. There are individual -- we have t32, training components with cooperative agreement and various mechanisms for people at different phase of their career. It could be a post doctoral fellowship, it could be a training program within an institution of training programs like a t32 or career development for associate level professors. So we -- it's a very important component of our funding and we -- you know, I spent a lot of time with potential grantees and helped guide them through the process. It's almost impossible without advanced training to be able to do research in intellectual disabilities. Autism research future directions for -- in my view for the I.D.D. branch and NICHD will continue to focus on a broad array of needs and documents by the strategic plan but we have long focused in the early diagnosis and early intervention because of the institute's mission in screening, national children's study so the earlier the better. That would continue to be one of the focuses for the future for my branch. The next focus is to make progress in understanding genetic and environmental contributions to A.S.D. and finally, to expand the capacity of NICHD brain and tissue bank for I.D.D. to include more A.S.D. examples. I put this slide in obviously courtesy

of autism speaks to show the ad campaign, the use of this slide was launched, the prevalence of -- you know, we all know we need to do another ad campaign because the prevalence has increased and I mentioned the paper in 2009 in pediatrics. The prevalence is one in 91 participants. The data is one in 110 so -- but the recruitment is different and the methodologies of analysis is different. But all to be sure that it's higher than one in 150. So it's a very important area of public health that we take very seriously. I like to talk about autism and the need for more research and more focus to treatment. I listed the six critical questions that frame the IACC strategic plan. They help you think about the researching needs from the parents' perspective. When we think about research, we think about what the parents are wondering about. What do they need answered? So these are questions that I think about. That leads to my hope to have more discussions or questions. It's to develop with the college here an integrated view of a common mission toward A.S.D. Our mission is the same. We want to research through research or biomedical research people with A.S.D. We already started thinking about we need to meet regularly and bring investigators together. It seems like there's a lot of overlaps, both at the site level or at the P.I. level. And then obviously, my second hope is to hopefully we can identify some opportunities for collaboration. For meeting, future funding opportunities, networking with branches. That's all I have to say. I invite any questions and I should have put my contact slide, but I'm sure you can find me at N.I.H. Website. Feel free to contact me if you want to apply for a grant or anything. I can help.

>> Thank you. We'll make sure that Dr. Alice Kau's contact information is available on emails that go out announcing the archives of the web cast being available. The archives is usually available in one to two weeks after our broadcast today so we will send an email to the participants to let them know that your archive is available and we will include Dr. Alice Kau's contact information in the email. We're waiting for questions so if the participants, webinar participants would like to submit their questions at this time, please feel free to do so. I'll take a couple of minutes to see if any of our guests in the room have any questions or comments. And if they do, if they could come to the microphone at the table.

>> While we are gathering questions, I want to make a comment about a picture at the beginning of my slide and the thank you slide. They're a courtesy of Melissa Cunningham. They are from Hawaii. My last name is kau and this is Hawaii so she thought it was fitting that I use them. I've been using them for the beginning and the end. Sfwl we do have a question that came in. I'll ask you that right now. The question is, which programs are working on screening and diagnosis?

>> That's the A.R.A. funding. Let me see. The P.I. of that -- I don't want to speak on top of my head. I know Cathy is working on a screening interview for research study. I can't remember the P.I. on top of my head. But if you send me an email, I'll let you know. We funded 24 of them. It may come to me. You want to know who is conducting it, right?

>> That's what she was asking.

>> All right. I can't remember the P.I. but I know there are only a few -- I want to say Amy weatherby but I'm not 100% sure.

>> Now, we're waiting for more questions so at this time, Dr. Alice Kau, do you have any questions for us? It's an integrated view of common missions.

>> Do you fund biomedical research like N.I.H. does?

>> We try to be sort of, you know, not overlap too much with the N.I.H. type of research. Our program is very small and we have -- we used to have seven to eight million in the base program but due to the autistic funding, we have set a cycle. Autism funds coming from the Department of Ag, \$10.5 million right now. We have started like research a couple of years ago, one on physical health intervention research which is a grantee is mass general. And the second one is on behavioral health which is UCLA. And then we have a number of small grants investigator NISH initiated. We did five last year. [Inaudible]

>> where did the data come from? You fund the analysis.

>> We fund the analysis and the data depends on the P.I.

>> I see.

>> These are competitions that we held once last year and we will have another competition this year. So that's basically the overview of all of the offices' main projects.

>> That's under research. Right here we fund training and you mentioned the leadership education note. We fund a lend grant. So I think there's all sorts of opportunities for collaboration that we should explore.

>> Right.

>> With the grantees and with us, between federal agencies.

>> Right. Especially at the sites where they have all three programs.

>> They have five or so. We should look geographically as well.

>> I didn't think of any other researches.

>> How exciting. And I'm here.

>> I know. It's the beginning of a wonderful collaboration.

>> Any additional questions? We don't have any additional questions. I think we will conclude our web cast today. I would like to thank Dr. Alice Kau for taking time out of her busy schedule to present. We appreciate her willingness to share information with us about the autism research and research resources at the Eunice Kennedy Shriver NICHD.

>> Good job.

>> I would also like to thank the audience for participating in today's web cast. Please take a few minutes at the end to fill out the online investigation form and let us know how you participated in the webinar today and give us ideas about future content for future web casts. We look forward to conducting another HRSA combating autism act web cast in April focused on projects in the MCHD Program. More information will be coming out soon about that upcoming web cast so stay tuned. I would like to say thank you again for participating and good afternoon. Thank you.